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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/372,667 | 08/11/1999 | MARK LEE AHRENS | 10990502-1 | 1716 |

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EXAMINER

JONES, HUGH M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2123

DATE MAILED: 10/03/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

21

Office Action Summary

Application No.

09/372,667

Applicant(s)

Ahrens et al.

Examiner

Hugh Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 3, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8, 10, 11, and 13-25 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 10, 11, and 13-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

1. Claims 1, 3-8, 10-11, 13-25 of U. S. Application 09/372,667, filed 08/11/1999 are presented for examination.

Response to Amendment

2. The amendment filed 7/14/2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the amendment to the claims and the new claims. Applicants have indicated that support for the amendments to the claims and the new claims is to be found in Figs. 2-6 and page 8, line 3 to page 14, line 14. The Examiner respectfully submits that such material constitutes the bulk of the specification, and further, has been unable to locate support for the amendments. The Examiner requests that Applicants point out the support with some particularity in order to advance prosecution. Applicant is required to cancel the new matter in the reply to this Office Action or to indicate support in the originally filed specification.

Claim Interpretation

3. The claims have been provided the broadest, most reasonable interpretation. Applicants appear to be claiming a closed circuit video system using a IEEE 488 bus system for remote testing of DUTs.

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Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 1, 3-8, 10-11, 13-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.** The added material which is not supported by the original disclosure is as follows: the amendment to the claims and the new claims. The Examiner requests that Applicants point out the support with some particularity in order to advance prosecution.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 5 recites the limitation "the video camera". **There is insufficient antecedent basis for this limitation in the claim.**

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

9. A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. Claims 1, 3-8, 10-11, 13-20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kamieniecki et al..

11. Kamieniecki et al. disclose an automated signal generator apparatus which allows *testing of remotely-controlled electronic devices* to verify functionality and reliability, or for product set-up, initialization or configuration. The apparatus simulates a person pressing the keys on a remote control key pad, and can simulate key press sequences, key press duration, and time between key presses. Other human interfaces may also be simulated. The apparatus can be continuously driven by an external computer in a slaved mode, or can store test instructions in an internal memory to operate in a standalone mode. Test instructions, which may be written in a macro script language, are processed by a microprocessor to provide a control signal to, e.g., an infrared (IR) transmitter. The IR transmitter can control one or more electronic devices which are under test. The transmitter may use a wide angle IR beam, or a plurality of separate transmitters for testing of a plurality of electronic devices at the same time. In a human learning mode, control signals from a human interface are processed to provide time compression or repetition of a fixed control sequence.

12. In particular, Kamieniecki et al. disclose:

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- connecting the DUT to a testing device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- connecting a remote controlling device to the testing device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- connecting a communications line (fig. 1 [# 125, 170]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- using a video camera (col. 7, lines 27-40);

- establishing a communications link between remote controller and remote controlling device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- transmitting DUT data to remote controller (fig. 1 [# 180]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- controlling testing device using input from remote controller (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

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- initializing, establishing and transmitting data/attribute of DUT (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- forwarding instructions to remote controller and forwarding to testing device (fig. 1 [#180]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13).

13. Claims 1, 3-8, 10-11, 13-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ziegra et al..

- Ziegra et al. disclose a method and system for remote assistance and review of an operator working with complex equipment. An operator at a station at a local site is coupled to an advisor at a station at a remote site, so that the advisor may view and hear the same stimuli as the operator, that the advisor and operator may communicate, and that the advisor may view and control the local apparatus. The operator has limited training or otherwise in need of support, and may be a field engineer or technician. The advisor has extensive training and able to provide technical support, and generally has extended and specialized knowledge with regard to the local apparatus, and may be a technical expert on the local apparatus. The operator may comprise an individual with technical training and knowledge, but lacking managerial or other authority, while the advisor comprises an individual with such authority. The operator communicates with the advisor by visual cues or ordinary speech, while the advisor views and listens to the local apparatus. The advisor gives advice to the operator for manipulating the local apparatus, and

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manipulates the local apparatus directly by means of the control signal or data signal feeds. Thus, the operator may operate the local apparatus as if the advisor were peeking over his shoulder; viewed alternatively, the advisor may operate the local apparatus as if the operator were an intelligent waldo. Alternatively, an intermediate advisor may advise/control the operator and be advised/controlled by a high-level advisor. See fig. 1-5 and corresponding text.

14. Claims 1, 3-8, 10-11, 13-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Moser et al..

- Moser et al. disclose a remote test unit for testing and conditioning one or more telephone lines includes multiple electronically erasable flash memory banks, which contain respective versions of the operating system employed by the test unit's micro-controller. An operating system modification routine employed by the host processor of a remote site allows the functionality of the remote test unit to be selectively modified by electronically installing an upgraded or downgraded version of the operating system, or by electronically selectively activating or deactivating one or more operational features of the currently active operating system. See fig. 1-2 and corresponding text.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 3-8, 10-11, 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Chandler et al. in view of the taking of Official Notice.

17. Chandler et al. disclose an automatic circuit board tester for testing for shorts, opens, and interconnected pins or nodes on a circuit board. The tester first classifies the nodes as being in one of three categories based upon the design of the board and the intended interconnection of the nodes. The categories of nodes are: (1) connected to ground; (2) interconnected to all other nodes in the test group; or (3) isolated from all other nodes. The circuit board tester has a testhead containing a plurality of test channels, each configured to be coupled to a node on the circuit board. The testhead utilizes a digital signal from a digital driver to drive the node at a predetermined voltage and a digital receiver to read the node voltage to determine if it is coupled to ground. Each test channel also includes a switch to connect the digital driver and receiver to the test node as well as a ground switch to selectively couple the node to ground. Various combinations of switch positions and testing sequences enables the circuit board tester to test all node connections and to ensure that the physical embodiment of the circuit board accurately reflects the circuit board design.

18. In particular, Chandler et al. discloses:

- connecting the DUT to a testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

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- connecting a remote controlling device to the testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- connecting a communications line (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- establishing a communications link between remote controller and remote controlling device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- transmitting DUT data to remote controller (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- controlling testing device using input from remote controller (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- initializing, establishing and transmitting data/attribute of DUT (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- forwarding instructions to remote controller and forwarding to testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

18. Chandler et al. do not disclose use of “video cameras”

19. Official Notice is taken that it would have been obvious to one of ordinary skill in the art at the time of the invention to employ video cameras during remote testing of DUTs because this provides other sources of information to the user which would not be as apparent from, for example, only electrical signals. For example, during testing of semiconductor DUTs, a video signal could show smoke, indicating overheating of the DUT.

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20. Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Chandler et al. in view of the taking of Official Notice and in further view of Mann] or [Kamieniecki et al. or Moser et al. or Ziegra et al.] in view of Mann.

21. The cited art does not recite a logic analyzer.

22. Mann discloses the use of a logic analyzer in remote test situations. Mann disclose a remotely accessible Integrated Debug Environment which permits a user having only a computer and an Internet connection to remotely access an IDE configured for operating and debugging a selected target microprocessor or microcontroller. An IDE is set up, including a host computer which operates as a web server and as a target/debug controller. One or more target processors may be connected to the host computer, along with debug equipment, such as logic analyzers, ICE equipment, overlay memory, etc. The host computer includes toolsets that correspond to the available target processor(s). In order to execute or debug code on a selected target processor, a user connects to the host computer using a web browser, with which the user can determine the availability of target processors and other pertinent information. The user can then download user interface software that will enable the user to implement an appropriate user interface on his computer, using the Internet to communicate with the host computer. Once the user interface is set up, the remote user can use the IDE system as though he were a local user, using control techniques familiar to those skilled in the art, to execute or debug software on the target processor. In preferred embodiments, the user interface is transmitted to the user as a Java

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bytecode, which is executable on most general purpose personal computers and workstations using widely available Java interpreters. See fig. 1-6.

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a logic analyzer as necessary, because some DUTs are complex logic circuits when can only be tested with logic analyzers.

Response to Arguments

24. Applicant's arguments filed 7/14/2003 have been fully considered but they are not persuasive.

25. Applicant's arguments (pp. 9-19, paper # 15) have been fully considered but are not persuasive. Applicants refer to various words/phrases ("analysis tool kit", for example) and argue that the cited art does not disclose such features. Applicants have not persuasively argued how the features are novel and non-obvious over the prior art of record. The Examiner therefore carefully reviewed the specification to determine the meaning of "analysis tool kit", for example. The Examiner respectfully submits that it does not appear to be defined in an unambiguous manner and is unable to determine a precise meaning.

26. Applicants have indicated that support for the amendments to the claims and the new claims is to be found in Figs. 2-6 and page 8, line 3 to page 14, line 14. The Examiner respectfully submits that such material constitutes the bulk of the specification. The Examiner

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requests that Applicants point out the support with some particularity in order to advance prosecution.

27. Furthermore, it is noted that Applicants have provided their own interpretation of the applied prior art without addressing the specifics of the rejections as stated in the Official Office Actions.

28. Consider claim 1, for example. This appears to merely recite remote control (via a communications channel) of test devices which are connected to DUTs. Compare this with:

Kamieniecki et al. who disclose:

- connecting the DUT to a testing device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- connecting a remote controlling device to the testing device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- connecting a communications line (fig. 1 [# 125, 170]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- using a video camera (col. 7, lines 27-40);

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- establishing a communications link between remote controller and remote controlling device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- transmitting DUT data to remote controller (fig. 1 [# 180]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- controlling testing device using input from remote controller (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- initializing, establishing and transmitting data/attribute of DUT (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- forwarding instructions to remote controller and forwarding to testing device (fig. 1 [# 180]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

And Chandler et al. who discloses:

- connecting the DUT to a testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);
- connecting a remote controlling device to the testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);
- connecting a communications line (fig. 1-2; col. 3, line 21 to col. 4, line 24);

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- establishing a communications link between remote controller and remote controlling device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- transmitting DUT data to remote controller (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- controlling testing device using input from remote controller (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- initializing, establishing and transmitting data/attribute of DUT (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- forwarding instructions to remote controller and forwarding to testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

29. Any inquiry concerning this communication or earlier communications from the examiner should be:

directed to:

Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET, *or* the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

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(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label "*PROPOSED*" or "*DRAFT*").

Dr. Hugh Jones

Primary Patent Examiner

April 20, 2002


HUGH JONES R.D.
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